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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,995	02/12/2004	David Malcolm Camm	SMARB11.001AUS	3328

EXAMINER	
WON, BUMSUK	

ART UNIT	PAPER NUMBER
2879	

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary

Application No.

10/777,995

Applicant(s)

CAMM ET AL.

Examiner

Bumsuk Won

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-75, 115 and 116 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-75, 115 and 116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/22/2007.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The response filed on 8/21/2007 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 55-75, 115 and 116 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the request for rejoinder of claims 76-114 and 117-131 upon allowing linking claim 116, the examiner respectfully denies because of rejections based on newly cited reference in the IDS filed on 8/22/2007.

Claim Objections

Claim 116 is objected to because of the following informalities: In claim 116, last line, "said irradiance flash" should be "said electromagnetic radiation". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 55, 56, 115, and 116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tim.

Regarding claim 55, Tim discloses an apparatus (figure 1) comprising: a flow generator (column 10, line 65 - column 11, line 3) configured to generate a flow of liquid (column 10, line

67, "water") along an inside surface of an envelope (column 10, line 67 - column 11, line 1); and first and second electrodes (44, column 11, lines 15-35, "tungsten halogen lamps or functional equivalent devices" in lines 30-31, the tungsten halogen lamps have two opposing electrodes, or 46, column 11, lines 36-57, "arc lamps", the arc lamps have two opposing electrodes) configured to generate electrical arc within the envelope to produce the electromagnetic radiation (column 11, lines 58-65).

Tim does not disclose the flow generator is electrically insulated.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the flow generator electrically insulated because it is well known in the art that where electric arc lamps and liquid exist near the lamps, electrical insulations needs to be installed for the purpose of preventing short circuiting between the lamps or within the lamps.

Regarding claim 56, Tim does not disclose the flow generator is electrically insulated.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the flow generator electrically insulated because it is well known in the art that where electric arc lamps and liquid exist near the lamps, electrical insulations needs to be installed for the purpose of preventing short circuiting between the lamps or within the lamps.

Regarding claim 115, Tim discloses an apparatus (figure 1) comprising: an electrically insulated means (column 10, line 65 - column 11, line 3) for generating a flow of liquid (column 10, line 67, "water") along an inside surface of an envelope (column 10, line 67 - column 11, line 1); and means (44, column 11, lines 15-35, "tungsten halogen lamps or functional equivalent

devices” in lines 30-31, the tungsten halogen lamps have two opposing electrodes, or 46, column 11, lines 36-57, “arc lamps”, the arc lamps have two opposing electrodes) for generating electrical arc within the envelope to produce the electromagnetic radiation (column 11, lines 58-65).

Tim does not disclose the flow generator is electrically insulated.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the flow generator electrically insulated because it is well known in the art that where electric arc lamps and liquid exist near the lamps, electrical insulations needs to be installed for the purpose of preventing short circuiting between the lamps or within the lamps.

Regarding claim 116, Tim discloses method (figure 1) of producing electromagnetic radiation, the method comprising: generating (column 10, line 65 - column 11, line 3) a flow of liquid (column 10, line 67, "water") along an inside surface of an envelope (column 10, line 67 - column 11, line 1), using an electrically insulated flow generator (40, 42, “quartz”); and generating electrical arc between first and second electrodes (44, column 11, lines 15-35, “tungsten halogen lamps or functional equivalent devices” in lines 30-31, the tungsten halogen lamps have two opposing electrodes, or 46, column 11, lines 36-57, “arc lamps”, the arc lamps have two opposing electrodes) to produce the electromagnetic radiation (column 11, lines 58-65).

Tim does not disclose the flow generator is electrically insulated.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the flow generator electrically insulated because it is well known in the art that where electric arc lamps and liquid exist near the lamps, electrical insulations needs

to be installed for the purpose of preventing short circuiting between the lamps or within the lamps.

Claims 57-63, 66, 69, 70, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tim in view of Nodwell (US 4,027,185).

Regarding claim 57, Tim discloses all the claim limitation except for the flow generator having a conductor.

Nodwell discloses an apparatus having a flow generator with a conductor (column 4, lines 16-64), for the purpose of efficiently generating the flow of liquid.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have having a flow generator with a conductor as disclosed by Nodwell in the apparatus disclosed by Tim, for the purpose of efficiently generating the flow of liquid.

Regarding claim 58, Nodwell discloses the first electrode (26) comprises a cathode (26) and wherein the electrical insulation (col 5, lines 4-27) surrounds the cathode and an electrical connection thereto (25). The reason for combining is same as claim 57.

Regarding claim 59, Nodwell discloses the electrical connection (25) comprises flow generator (27). The reason for combining is same as claim 57.

Regarding claim 60, Nodwell discloses the electrical insulation (col 5, lines 4-27) surrounding the flow generator comprises the envelope (42). The reason for combining is same as claim 57.

Regarding claim 61, Nodwell discloses the electrical insulation surrounding the flow generator comprises an insulative housing (col 4, lines 5-15). The reason for combining is same as claim 57.

Regarding claim 62, Nodwell discloses the insulative housing (22) surrounds at least a portion of the envelope (42). The reason for combining is same as claim 57.

Regarding claim 63, Nodwell discloses the electrical insulation comprises gas () in a space between the insulative housing and the portion of the envelope (col 2, lines 45-65). The reason for combining is same as claim 57.

Regarding claim 66, Nodwell discloses the envelope is transparent cylindrical tube (col 4, lines 5-15, 52-64). The reason for combining is same as claim 57.

Regarding claims 69 and 70, Nodwell discloses the tube is a hollow cylinder (col 4, lines 50-55). The examiner notes that a precision bore cylindrical tube having a specific dimensional tolerance of 5×10^{-2} or lower does not have unobvious difference with the hollow cylinder (42, col 4, lines 50-55), therefore, the claimed limitation is not afforded patentable weight. The reason for combining is same as claim 57.

Regarding claim 75, Nodwell discloses the insulative housing comprises ceramic (col 4, lines 5-15). The reason for combining is same as claim 57.

Claims 64, 65, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tim in view of Nodwell, in further view of Parfeniuk (6,621,199).

Regarding claim 64, Tim in view of Nodwell discloses all the claimed limitation except for having a pair of spaced apart seals cooperating with an inner surface of the insulative housing and an outer surface of the portion of the envelope to seal the gas in the space.

Parfeniuk discloses an apparatus for producing electromagnetic radiation comprising a pair of seals (fig 1, 106, 87, 114) between housing (110) and envelope (13), for the purpose of sealing the gap between the housing and the envelope.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a pair of seals between housing and envelope disclosed by Parfeniuk in the apparatus disclosed by Tim in view of Nodwell, for the purpose of sealing the gap between the housing and the envelope.

Regarding claim 65, Nodwell discloses the gas is compressed (col 2, lines 45-64).

Regarding claim 71, Parfeniuk discloses the tube comprises quartz (col 4, lines 42-58).

The reason for combining is as same as claim 64.

Regarding claim 72, Parfeniuk discloses the tube comprises pure quartz (col 4, lines 42-58). The reason for combining is as same as claim 64.

Claims 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tim in view of Nodwell, in further view of Schenck (5,753,106).

Regarding claims 67 and 68, Tim in view of Nodwell discloses all the claimed limitation except for the thickness of the tube.

Schenck discloses an apparatus (fig 1) for radiation having a cylindrical tube (2) made of quartz having a wall thickness of 5 to 100 mm (col 13, lines 37-64), for the purpose of preventing from overheating (col 13, lines 37-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a thickness of a tube being 5 to 100 mm disclosed by Schenck in the apparatus disclosed by Tim in view of Nodwell, for the purpose of preventing from overheating.

Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tim in view of Nodwell, in further view of Parfeniuk, in further view of Ashely (5,137,659).

Regarding claim 73, Tim in view of Nodwell, in further view of Parfeniuk discloses all the claim limitation except for the tube is cerium doped.

Ashely discloses an apparatus in an analogous art using cerium in an housing for radiation emitting device (col 8, lines 16-21), for the purpose of enhancing transparency (col 8, lines 16-21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have cerium disclosed by Ashely in the apparatus disclosed by Tim in view of Nodwell, in further view of Parfeniuk, for the purpose of enhancing transparency.

Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tim in view of Nodwell, in further view of Parfeniuk, in further view of Kimble (6,465,799).

Regarding claim 74, Tim in view of Nodwell, in further view of Parfeniuk discloses all the claim limitation except for the tube is sapphire.

Kimble discloses an apparatus in an analogous art using sapphire in an housing for radiation emitting device (col 6, lines 11-46), for the purpose of enhancing transparency.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have sapphire disclosed by Kimble in the apparatus disclosed by Tim in view of Nodwell in further view of Parfeniuk, for the purpose of enhancing transparency.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 8/22/2007 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

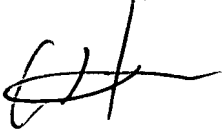
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bumsuk Won whose telephone number is 571-272-2713. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Bumsuk Won/

Patent Examiner, Art Unit 2879



JOSEPH WILLIAMS
PRIMARY EXAMINER